WV-X86531-Z2

4 x 5MP Outdoor Multi-directional + 2MP (1080p) 21x PTZ Network Camera with AI Engine

Multi-directional + PTZ Camera with AI Engine

*Outdoor model only, As of February 2023, based on i-PRO own research

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- 4 x 5MP multi-directional camera + 2MP 21x PTZ camera
- Discreet design
- Up to 6 Edge AI analytic apps
- AI auto tracking
- No calibration required
- Pan/Tilt speed up to 500 deg/s
- IP66, IP67, IK10 rated
- Built-in FIPS 140-2 Level 3 Compliant Secure Element
- NDAA compliant

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SPECIFICATIONS

Camera	
Image Sensor	<Multi Part> 4x 1/2.7 type CMOS image sensor <PTZ Part> 1/2.8 type CMOS image sensor
Scanning Area	<Multi Part> 5.12 mm (H) × 3.84 mm (V) {3/16 inches (H) × 5/32 inches (V)} <PTZ Part> 5.57 mm (H) × 3.13 mm (V) {7/32 inches (H) × 1/8 inches (V)}
Minimum Illumination	<Multi Part> Color : 0.12 lx (30IRE, F2.0, 1/30 s, AGC:11)* 0.17 lx (50IRE, F2.0, 1/30 s, AGC:11) 0.011lx (50IRE, F2.0, 16/30 s, AGC:11)* BW : 0.10 lx (50IRE, F2.0, 1/30 s, AGC:11) 0.007lx (50IRE, F2.0, 16/30 s, AGC:11)* <PTZ Part> Color : 0.011 lx (30IRE, F1.6, 1/30 s, AGC:11)* 0.015 lx (50IRE, F1.6, 1/30 s, AGC:11) 0.001x (50IRE, F1.6, 16/30 s, AGC:11)* BW : 0.006 lx (50IRE, F1.6, 1/30 s, AGC:11) 0.0004lx (50IRE, F1.6, 16/30 s, AGC:11)* *Converted Value
White Balance	ATW1/ ATW2/ AWC
Maximum shutter	<Multi Part> 15 fps mode: Max.1/10000s to Max.16/30s <PTZ Part> 60 fps mode: Max.1/4000s to Max.16/30s 30 fps mode: Max.1/4000s to Max.16/30s 15 fps mode: Max.1/4000s to Max.16/30s
Intelligent Auto	On / Off
Super Dynamic	<Multi Part> On / Off, The level can be set in the range of 0 to 31. <PTZ Part> On / Off, The level can be set in the range of 0 to 31.*1
Dynamic Range	<Multi Part> 108 dB max.(Super Dynamic: On, Level: 31) <PTZ Part> 144 dB max.(Super Dynamic: On, Level: 31)
Adaptive Black Stretch	The level can be set in the range of 0 to 255.
Back Light Compensation/High Light Compensation	BLC (Back light compensation) / HLC (High light compensation) / Off (only when Super dynamic / Intelligent Auto : Off)
Fog Compensation	On / Off (only when Intelligent auto / auto contrast adjust : Off)
Maximum Gain (AGC)	The level can be set in the range of 0 to 11.
Color/BW (ICR)	Off／On／Auto1(Normal)／Auto2(IR Light)／Auto3(SCC)
IR LED Light	-
Digital Noise Reduction	The level can be set in the range of 0 to 255.
Panorama	-

Video Motion Detection (VMD)	On / Off, 4 areas available
Scene Change Detection (SCD)	On / Off, 1 areas available
Audio Detection	On/Off
AI Sound Classification	Selectable from Gunshot, Yell, Vehicle horn, Glass break
AI Analytics	AI Video Motion Detection, AI Privacy Guard, AI Face Detection, AI People Detection, AI Vehicle Detection, AI Non mask Detection (prior to V2.70), AI Occupancy Detection, AI Scene Change Detection For details : https://i-pro.com/products_and_solutions/en/surveillance/products/analytics-software 3rd party applications are also available. https://i-pro.com/products_and_solutions/en/surveillance/solutions/edge-ai-platform/application-list
Privacy Zone	<Multi Part> On / Off, Up to 8 zones available <PTZ Part> On / Off, Up to 32 zones available
VIQS	<Multi Part> On / Off, Up to 8 zones available <PTZ Part> On / Off, Up to 8 zones available
Image Stabilizer	<Multi Part> - <PTZ Part> On / Off (Built-in gyro sensor)
Image Rotation	Upside-down: On/Off
Camera Title (OSD)	On/ Off, Up to 40 characters, Up to 2 Lines (alphanumeric characters, marks)
Focus Adjustment	<Multi Part> - <PTZ Part> Auto focus

Lens	
Optical zoom	<Multi Part> 1x <PTZ Part> 21x (Motorized zoom / Motorized focus)
Extra zoom	<Multi Part> max 4.0x (when resolution is 640x360) <PTZ Part> max 31x (when resolution is 1280x720)
Digital (Electrical) zoom	<Multi Part> - <PTZ Part> 31x ～ 336x
Focal length	<Multi Part> 3.2mm <PTZ Part> 4.0mm - 84.6mm｛5/32inches - 3-11/32 inches｝
Angular Field of View	<Multi Part> Horizontal : 97 deg. / Vertical : 71 deg. <PTZ Part> Horizontal : 3.7 ° to 77 ° / Vertical : 2.2 ° to 44°
Maximum Aperture Ratio	<Multi Part> 2 <PTZ Part> 1：1.6（WIDE） to 1：4.5（TELE）
Focus range	<Multi Part> 1 m {3.28 ft} to ∞ <PTZ Part> 1.5 m {59-1/16 inches} to ∞

DORI	
Detect (25ppm / 8ppf)	<Multi Part> 45.3 m / 148.6 ft <PTZ Part> Wide: 48.3 m / 158.4 ft, Tele: 1188.9 m / 3900.5 ft
Observe (62.5ppm / 19ppf)	<Multi Part> 18.1 m / 59.4 ft <PTZ Part> Wide: 19.3 m / 63.4 ft, Tele:475.5 m / 1560.2 ft
Recognize (125ppm / 38ppf)	<Multi Part> 9.1 m / 29.7 ft <PTZ Part> Wide: 9.7 m / 31.7 ft, Tele: 237.8 m / 780.1 ft
Identify (250ppm / 76ppf)	<Multi Part> 4.5 m / 14.9 ft <PTZ Part> Wide: 4.8 m / 15.8 ft, Tele: 118.9 m / 390.0 ft

System on Chip (SoC)

System on Chip (SoC)	<Multi Part> Ambarella CV2 <PTZ Part> Ambarella CV25m

Adjusting Angle	
Adjusting Angle	<Multi Part> Camera 1,2,3,4:Vertical: 40 ±7° (Adjust by vertical (TILT) angle) <PTZ Part> Horizontal : 360° Endless Panning / Vertical : -15 to +195°/Yaw : 0°

Pan /tilt	
Panning Range	360 °Endless panning
Panning Speed	Manual ： 0.065 °/s – 150°/s, Preset ： Up to 500 °/s
Tilting Range	Operational -15 – +195°
Tilting Speed	Manual ： 0.065 °/s – 150°/s, Preset ： Up to 500 °/s
Preset Positions	256 positions
Auto Mode	Auto track / Auto pan/ Preset sequence/ Patrol
Self Return	10 s/ 20 s/ 30 s/ 1 min/ 2 min/ 3 min/ 5 min/ 10 min/ 20 min/ 30 min/ 60 min

Browser GUI	
Camera Control	Brightness, AUX On / Off
Audio	Mic (Line) Input : On / Off , Volume adjustment : Low / Middle / High Audio Output : On / Off , Volume adjustment : Low / Middle / High
GUI / Setup Menu Language	English, Italian, French, German, Spanish, Portuguese, Russian, Chinese, Japanese
Browser	Microsoft Edge, Firefox, Google Chrome

Network	
Network IF	10 BASE-T/100 BASE-T/1000 BASE-T, RJ45 connector *2
Resolution H.265/ H.264/ JPEG (MJPEG)	<Multi Part> [4:3] (15fps mode)/[4:3] (12.5fps mode) 3072 x 2304*3, 2560x1920, 1280 x 960, VGA, QVGA [4:3] (15fps Quad mode)/[4:3] (12.5fps Quad mode) 3072 x 2304*3, 2560x1920, 1280 x 960, VGA [16:9] (15fps mode) / [16:9] (12.5fps mode) 3072 x 1728*3, 2560x1440, 1920 x 1080, 1280 x 720, 640×360, 320×180 [16:9] (15fps Quad mode)/[16:9] (12.5fps Quad mode) 3072 x 1728*3, 2560x1440, 1920 x 1080, 1280 x 720, 640×360 <PTZ Part> [16:9 mode (60 fps mode)][16:9 mode (30 fps mode)][16:9 mode (50 fps mode)][16:9 mode (25 fps mode)] 1920x1080, 1280x720, 640x360, 320x180 [4:3 mode (30 fps mode)][4:3 mode (25 fps mode)] 1280x960, VGA, QVGA [4:3 mode (15 fps mode)][4:3 mode (12.5 fps mode)] 2048x1536*3, 1280x960, VGA, QVGA
H.265/H.264	[Transmission Mode] Constant bit rate / VBR / Frame rate / Best effort [Transmission Type] Unicast port (AUTO) / Unicast port (MANUAL) / Multicast
JPEG	[Image Quality] 10 steps
Smart Coding	GOP (Group of pictures) control : On (Frame rate control)* / On (Advanced)* / On (Mid) / On (Low) / Off *On (Frame rate control) and On (Advanced) are only available with H.265. Smart VIQS: On(High)/On(Low)/Off, Smart P-picture control: On/Off
Audio Compression	G.726(ADPCM): 32 kbps/16 kbps, G.711: 64 kbps, AAC-LC: 64kbps/96kbps/128kbps *4
Audio Transmission Mode	Off / Mic (Line) input / Audio output / Interactive (Half duplex) / Interactive (Full duplex)

Supported Protocol	<Multi Part> IPv6: TCP／IP、UDP／IP、HTTP、HTTPS、SSL/TLS、SMTP、DNS、NTP、SNMPv1/v2/v3、DHCPv6、RTP、MLD、ICMP、ARP、IEEE 802.1X、DiffServ、MQTT IPv4: TCP／IP、UDP／IP、HTTP、HTTPS、SSL/TLS、RTSP、RTP、RTP／RTCP、SMTP、DHCP、DNS、DDNS、NTP、SNMPv1/v2/v3、UPnP、IGMP、ICMP、ARP、IEEE 802.1X、DiffServ, SRTP、MQTT <PTZ Part> IPv6: TCP／IP、UDP／IP、HTTP、HTTPS、SSL/TLS、SMTP、DNS、NTP、SNMPv1/v2/v3、DHCPv6、RTP、MLD、ICMP、ARP、IEEE 802.1X、DiffServ IPv4: TCP／IP、UDP／IP、HTTP、HTTPS、SSL/TLS、RTSP、RTP、RTP／RTCP、SMTP、DHCP、DNS、DDNS、NTP、SNMPv1/v2/v3、UPnP、IGMP、ICMP、ARP、IEEE 802.1X、DiffServ, SRTP, FTP, SFTP, MQTT, LLDP, NTCIP
No. of Simultaneous Users	<Multi Part> 24 (Number of sessions that can connect to cameras at the same time) * Depends on network conditions <PTZ Part> 14 (Number of sessions that can connect to cameras at the same time) * Depends on network conditions
Secure	FIPS 140-2 level 3 (NXP® EdgeLock® SE050F), Device Certificate GlobalSign® pre-installed, HTTPS, User authentication, Digest authentication, Host authentication, IEEE802.1X, System log, Image transmission log, Brute-force protection, Alteration detection, Signed Firmware
SDXC/SDHC/SD Memory Card	microSDXC memory card：64 GB, 128 GB, 256 GB, 512 GB microSDHC memory card：4 GB, 8 GB, 16 GB, 32 GB , microSD memory card ：2 GB
Mobile Terminal Compatibility	iPad / iPhone (iOS 8.0 or later), AndroidTM terminals
ONVIF® Profile	G / M / S / T

Alarm	
Alarm Source	3 terminals input, VMD alarm, SCD alarm, Command alarm, Audio detection alarm
Alarm Actions	SDXC/SDHC/SD memory recording, E-mail notification, HTTP alarm notification Indication on browser, TCP alarm notification output

Input/Output	
Audio input *6	ø3.5 mm stereo mini jack For microphone input : Recommended applicable microphone : Plug-in power type (Sensitivity of microphone : -51 dB～-38dB (0 dB=1 V/Pa, 1 kHz)) Input impedance : Approx. 2 kΩ (unbalanced) Supply voltage：2.5 V ±0.5 V For line input：Input level: Approx. –10 dBV
Audio Output *6	ø3.5 mm stereo mini jack (Audio output is monaural.) Output impedance: Approx. 600 Ω (unbalanced) , Output level: –20 dBV
External I/O Terminals *6	ALARM IN 1 (Alarm input 1/ Black & white input/ Auto time adjustment input) (x1) ALARM IN 2 (Alarm input 2/ ALARM OUT) (x1) , ALARM IN 3 (Alarm input 3/ AUX OUT) (x1)
Monitor Output	Yes (for adjustment) Φ3.5mm stereo mini jack, NTSC or PAL signal can be output from camera *WV-QCA501A is required

General	
Safety	UL (UL62368-1), c-UL (CSA C22.2 No.62368-1), CE, IEC62368-1
EMC	FCC (Part15 ClassA), ICES-003 ClassA, EN55032 ClassA, EN55035
Power Source and Power Consumption	PoE++（IEEE802.3bt compliant): DC 54 V : 0.66A/Approx. 35.6 W (Class 5 device)
Ambient Operating Temperature	–40 °C to +55 °C {–40 °F to 131 °F} (Power On range: –20 °C to +55 °C {–4 °F to 131°F}) Maximum temperature according to NEMA TS 2 (2.2.7) : 74℃(165℉)
Ambient Operating Humidity	10 % to 100 % (no condensation)

Anti-Condensation System	Temish element
Water and Dust Resistance	IP67/IP66 (IEC 60529), Type 4X (UL50E), NEMA 4X compliant
Shock Resistance	IK10 (IEC 62262)
Wind Resistance	Up to 40 m/s {approx. 89 mph}
Other standard support	NEMA TS 2 (2.2.7-2.2.9)
Dimensions	ø250 mm x 195 mm (H)
Mass (approx.)	Approx. 3.8 kg
Finish	Main body: Aluminum die cast, i-PRO white Outer fixing screws: Stainless steel (Corrosion-resistant treatment) Dome cover: PC resin, Clear

NOTES

*1 When 60 fps or 50 fps is selected, the Super Dynamic function is automatically set to off.
*2 This model has 2 IP addresses with 1 network interface. Therefore you may be required 2 VMS licenses.
*3 Used by super resolution techniques.
*4 When recording audio on a micro SD memory card, only use AAC-LC (Advanced Audio Coding - Low Complexity).
*5 “<Control No.: C****>” used in this document should be used to search for information on our technical information website (https://i-pro.com/global/en/surveillance/training-support/support/technical-information) and will guide you to the right information.
*6 When using with them, WV-QCA501A cable is required.

Important
– Safety Precautions : Carefully read the Basic Information,Installation Guide and Operating Instructions before using this product.
– i-PRO Co., Ltd. cannot be held responsible for the performance of the network and/or other manufacturers' products usedonthe network.
– Masses and dimensions are approximate.
– Specifications are subject to change without notice.
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OPTIONAL ACCESSORIES

Select a compatible accessory
Accessory Selector (i-pro.com)

WV-QWL506-W
4-screw Wall Mount Bracket

WV-QWL506M1-W
ANSI Male Wall Mount Bracket (1.5”NPT)

WV-QWL501-W
Mount Bracket

WV-QSR508M1-W
Mount Bracket

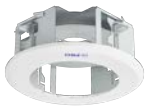
WV-QSR508M-W
Mount Bracket

WV-QSR508F1-W
Mount Bracket

WV-QSR508F-W
Mount Bracket

WV-QSR508-W
Mount Bracket

WV-QPL500-W
Mount Bracket



WV-QEM506-W
Ceiling Mount Bracket

WV-QCN500-W
Mount Bracket

WV-QCL501-W
Mount Bracket

WV-QCL101-W
Mount Bracket

WV-QCL100-W
Mount Bracket

WV-Q105A
Mount Bracket

PPRM35AW
Parapet Mount Bracket

WV-SDB256G
i-PRO SD Memory Card

WV-SDB128G
i-PRO SD Memory Card

WV-SDB064G
i-PRO SD Memory Card

WV-SDB032G
i-PRO SD Memory Card

WV-QDC502G
Dome Cover

WV-QDC502C
Dome Cover

WV-QCA501A
I/O Cable

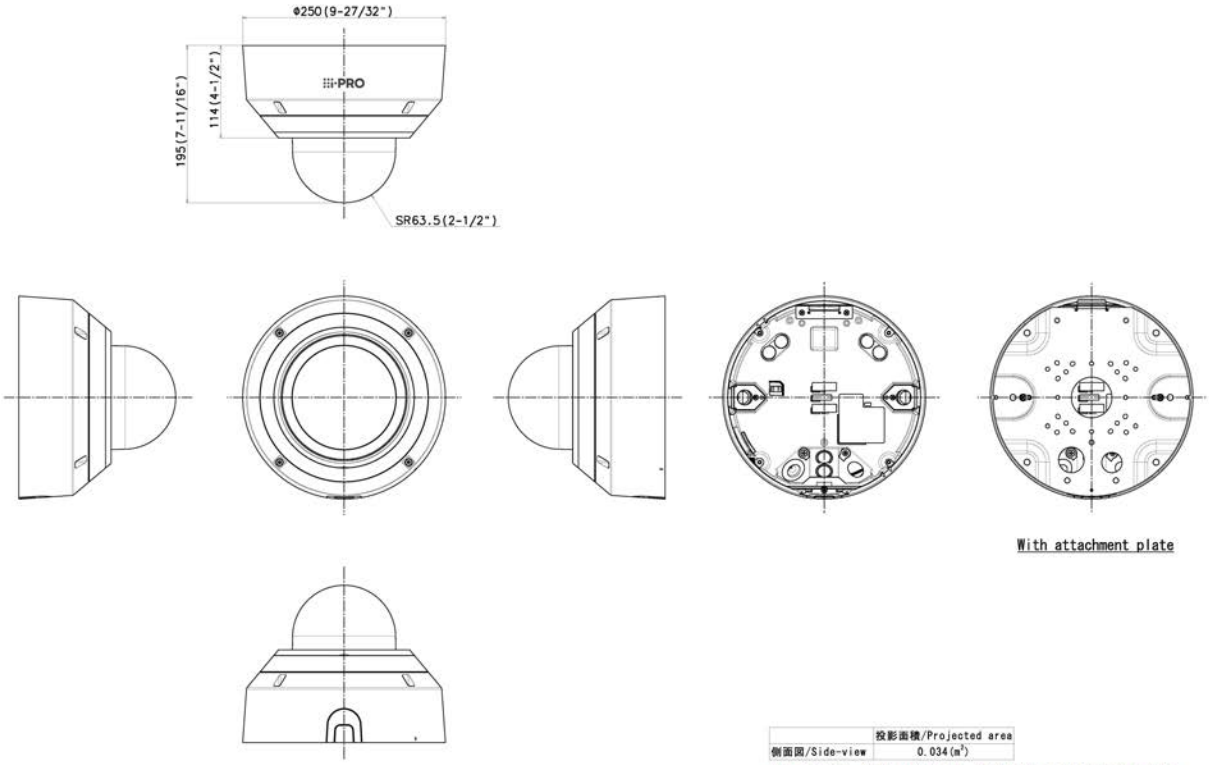
WV-PM500
Compact microphone unit

WJ-PU201P

WJ-PU201/G

PoE Injector PoE Injector

APPEARANCE



	投影面積/Projected area
側面図/Side-view	0.034 (m^2)

Mass : Approx. 3.8 kg (8.39 lbs) (When using the attachment plate)

Unit:mm